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[56]

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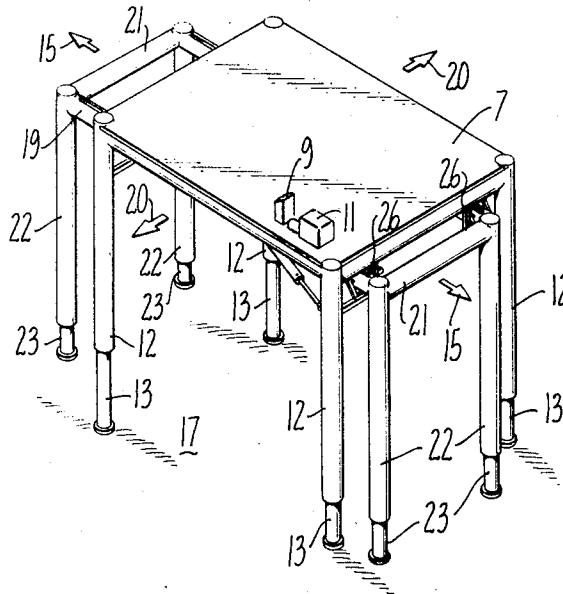
[54] **SELF-PROPELLED PLATFORM TOWER**
1 Claim, 6 Drawing Figs.

[52] U.S. Cl. **180/8 E,**
61/46.5, 115/9

[51] Int. Cl. **B62d 57/02,**
E02b 17/00

[50] Field of Search 61/46.5, 45 D,
63; 180/8 C, 8 E, 8 R, 4; 115/9

ABSTRACT: This invention relates to a deck or work platform supported so that it can be moved in a selected direction and to a selected extent over the ground both under water and on land. It may be used on the sea bottom, particularly in an offshore location. It may also be used on tundra, muskeg, swampy locations and the like.



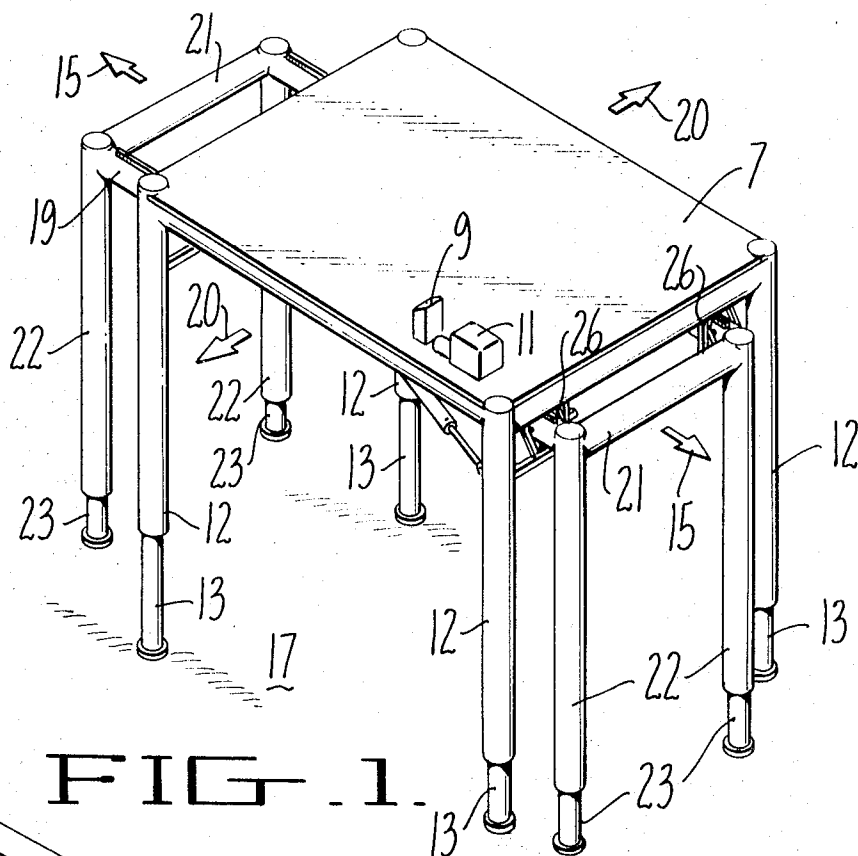


FIG. 1.

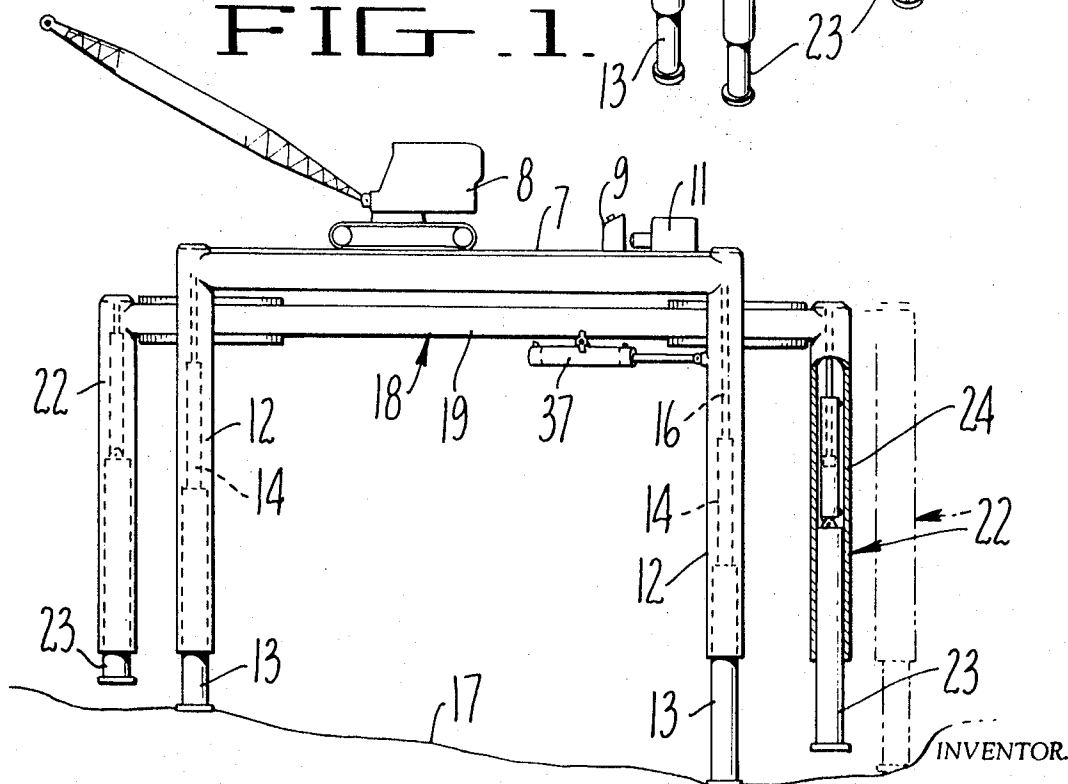


FIG. 2.

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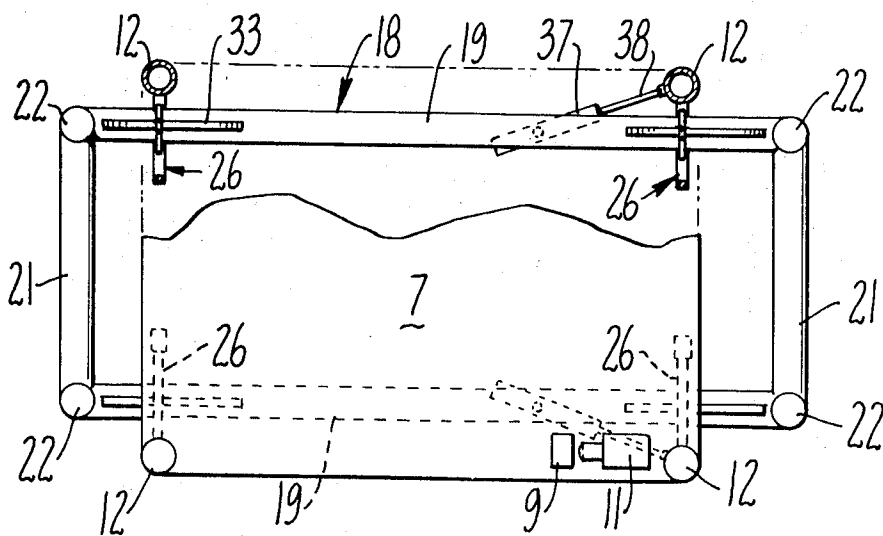


FIG. 3.

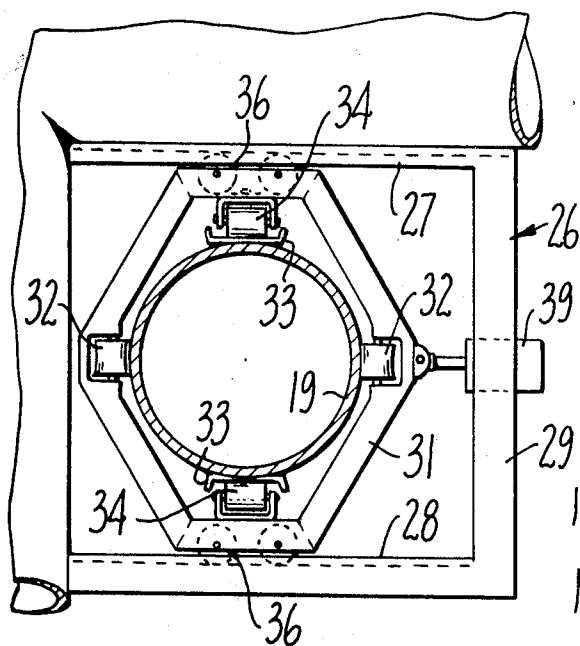


FIG. 5.

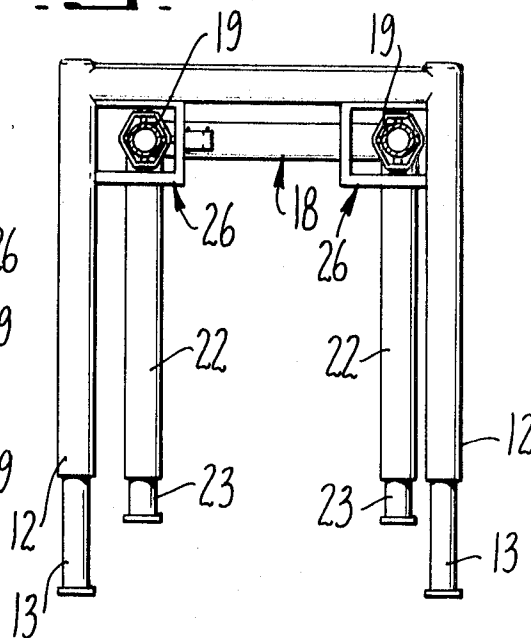


FIG. 4.

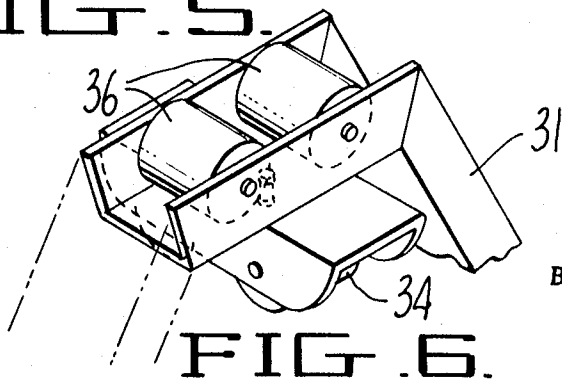


FIG. 6.

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SELF-PROPELLED PLATFORM TOWER

BACKGROUND OF THE INVENTION

Exploitation of various materials which are found offshore, such as minerals, oil, deposits of oyster shells and the like, are gaining in extensiveness. The provision of a suitable platform or work surface has been met in various ways, usually by erecting a structure in one location.

In accordance with this invention, I provide a work platform which can be moved over the ground from one location to another so that the area undergoing exploitation, such as construction, exploration or the like, can be changed from time to time as desired.

SUMMARY OF THE INVENTION

It is in general the broad object of the present invention to provide a movable platform which can be moved over ground as desired from time to time.

A further object of the invention is to provide a platform which can be moved fore and aft and transversely as desired.

A BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a perspective view of the movable platform or work deck of this invention.

FIG. 2 is a side elevation of the work platform.

FIG. 3 is a plan view of the work platform.

FIG. 4 is an end view of the work platform.

FIG. 5 is an enlarged end view showing a support for the frame which is utilized to move the work deck.

FIG. 6 is a perspective view showing the double roller support.

DESCRIPTION OF THE PREFERRED EMBODIMENT

In accordance with this invention, I provide a work deck or platform 7. This is generally rectangular in shape and provides a solid working surface to support suitable tools such as the derrick, generally indicated at 8. Mounted on the surface of the deck is a control panel 9 which includes suitable controls for operation of hydraulic pump 11 which is utilized to supply pressure for the operation of various hydraulic rams as will be presently described.

In accordance with this invention, I provide a first set of vertical corner posts 12 at each of the four corners of the work deck. Each corner post includes and supports a movable ground-engaging member 13. Each ground-engaging member can be selectively raised and lowered with respect to its supporting corner post by means of the hydraulic ram, indicated at 14, this being supplied with fluid under pressure from pump 11 through line 16 under the supervision of control panel 9. As appears in FIG. 2, the several ground-engaging members may be at different elevations depending upon the contour of the sea bottom, generally indicated at 17.

In accordance with this invention, I provide a rectangular frame 18 which is selectively movable in a fore-and-aft direction as indicated by arrows 15 with respect to the deck and in a direction transverse to the deck as indicated by arrows 20. The frame 18 is made up of longitudinal cylindrical members 19 and transverse cylindrical members 21 joined together to form a rectangular frame. At each corner of the frame, a second set of four corner posts 22 is provided. These are similar in construction to each of the four corner posts previously described and which are attached to the deck 7; each of corner posts 22 supports a movable ground-engaging member 23 which is raised and lowered by an hydraulic ram 24 with fluid from pump 11.

At each corner of the deck 7, a rectangular frame, generally indicated at 26, is mounted, this having an upper channel rail 27, a lower channel rail 28 supported on one side by a corner post 12 and at the other end by the vertical member 29. Each of the horizontal members 19 is supported in a hexagonal frame 31 (FIG. 5) having vertically extending rollers 32 mounted therein on opposite sides to support one of the tubular members 19. At the top and bottom of each tubular

member 19, tracks 33 are provided and are engaged with horizontal rollers 34. At the top and bottom of the hexagonal frame 31, rollers 36 ride in the channel rails 27 and 28 to permit the hexagonal frame and the supported frame 18 to be moved transversely of the deck by the hydraulic ram, generally indicated at 39. To move the frame 18 fore and aft, another ram structure, generally indicated at 37, is mounted on the underside of each of the frame members 19 as appears in FIG. 3, each of the piston rods 38 being connected to one of the corner posts 12.

In operation, with the platform 7 being suitably supported only on the sea bottom by the corner posts 12 and it being desired to move the platform forward to another location, fluid would be supplied to the hydraulic rams 37 to move the frame 18 forward of the platform to the greatest extent permissible as indicated in the dotted line position of the frame and corner post 22 on the right of FIG. 2. When this forward movement has been completed, the ground-engaging members 23 in corner posts 22 being elevated, such members 23 would then be moved downwardly to engage the sea bottom. When this engagement has been attained, the movable elements 13 in each of the corner posts 12 would be retracted and the platform 7 moved forwardly by the rams 37. When this forward movement has been completed, the movable elements 13 in each of the corner posts 12 would be lowered to engage bottom following which the retraction of movable elements 23 in each of the corner posts 22 of the movable frame would be effected and the further forward movement of frame 18 would then be effected.

When it was desired to move the structure transversely or sideways, this would be achieved by moving the frame 31 by the ram 39, the movable elements 23 being in a retracted position in each of the corner posts 22.

The forward and transverse movement of the platform 7 on the frame 18 can be achieved simultaneously, that is, platform 7 can be moved forwardly and transversely at the same time because the platform 7 is adequately supported by the frame 18.

From the foregoing, I believe it will be apparent that I have provided a novel and simple movable platform construction which can be moved fore and aft and transversely as desired over sea bottom which may be of quite an uneven contour.

I claim:

1. In a movable platform comprising:
 - a. a flat generally horizontal rectangular deck,
 - b. a first set of four corner posts provided at each corner of said deck,
 - c. each of said first corner posts including and supporting a movable ground-engaging member therein,
 - d. means for raising and lowering each movable ground-engaging member (c) with respect to its supporting corner posts,
 - e. a rectangular frame,
 - f. means supporting said frame on said deck for movement selectively fore and aft of said deck and transversely of said deck,
 - g. means for moving said frame selectively in each such direction,
 - h. a second set of four corner posts provided at each corner of said frame,
 - i. each of said second corner posts including and supporting a movable ground-engaging member therein, and
 - j. means for raising and lowering each movable ground-engaging member (i) with respect to its supporting corner posts.

The improvement comprising:

- k. track means mounted at each corner of the deck and extending transversely of the deck at each such corner,
- l. a movable frame supported on the track means and movable thereon,
- m. and means for moving each movable frame selectively with respect to the deck,
- n. each movable frame supporting a member of the rectangular frame.